AMENDMENTS TO THE SPECIFICATION

Page 1, lines 4-14, please amend as follows:

In independent suspensions for motor-vehicles it is known the use of ~~rod-like~~ rod connection members which are articulated at their ends to the wheel-carrier and to the vehicle structure and are capable of eliminating only one degree of freedom, that is to say, the degree of freedom of translation along the axis of the rod. A typical example of application of rod-like connection members is provided by multi-link suspensions. This type of suspension ensures high elasto-kinematic performances, but has the drawback of considerably higher manufacturing costs than simpler suspension architectures.

Lines 24-28 to page 2, lines 1-7, please amend as follows:

In short, the invention is based on the idea of providing an independent suspension for a motor-vehicle comprising three ~~rod-like~~ rod connection members, each of these members having at one end a first single point of articulation to the wheel-carrier and at the opposite end a second single point of articulation to the vehicle structure and being arranged to control one degree of freedom of translation along its own axis; the suspension being also arranged to control the remaining two degrees of freedom of the wheel-carrier by virtue of the torsional stiffness of at least one of the ~~rod-like~~ rod connection members about its own axis and about a direction substantially perpendicular to its own axis.

Page 2, lines 8-16, please amend as follows:

According to a preferred embodiment of the invention, forming object of Claim 2, a first ~~rod-like~~ rod connection member is arranged to control three degrees of freedom of the wheel-

carrier, that is to say, the degree of freedom of translation along its own axis and the two degrees of freedom of rotation about its own axis and about a direction perpendicular to its own axis, whereas the other two ~~rod-like~~ rod connection members are each arranged to control only the degree of freedom of translation about its own axis.

Lines 26-29, please amend as follows:

Figure 6 is an exploded plan view of a ~~rod-like~~ rod connection member for the suspension of Figure 1; and

Figure 7 is an exploded plan view of a constructional variant of the ~~rod-like~~ rod connection member of Figure 6.

Page 3, lines 1-31 to page 4, line 1, please amend as follows:

In the description and the claims which follow, terms such as "longitudinal" and "transverse", "vertical" and "horizontal", "front" and "rear" are to be intended as referred to the mounted condition on the vehicle. Moreover, the expression "axis of the ~~rod-like~~ rod connection member" is intended as the direction substantially passing through the points of articulation of the member.

Referring first to Figures 1 and 2, a independent suspension for connecting a wheel-carrier 1 of a wheel 2 of a motor-vehicle, in particular a non-steering wheel, to the structure of the motor-vehicle (not shown) basically comprises three ~~rod-like~~ rod connection members, indicated 10, 11 and 12, respectively. Each of the three ~~rod-like~~ rod connection members 10, 11 and 12 is provided at its ends with a first and a second single point of articulation to the wheel-carrier 1 and to the vehicle structure, respectively, and is arranged to control the degree of

freedom of translation along its own axis, that is, along the direction substantially passing through its own points of articulation.

As will be described in detail further on, in the embodiment shown in Figure 1 and 2 the first ~~rod-like~~ rod connection member 10 is arranged to control three degrees of freedom of the wheel-carrier 1 (two rotational degrees of freedom in addition to the translational degree of freedom), whereas the second and the third connection member 11 and 12 are each arranged to act as a simple connecting rod which controls the sole degree of freedom of translation along its own axis, wherein the expression "controlling a degree of freedom" is to be intended in the sense of providing a stiffness high enough to allow considerably smaller displacements in the direction of the controlled degree of freedom than those allowed in the other directions.

Page 4 lines 2-31 to page 5, lines 1-5, please amend as follows:

In the suspension shown in Figures 1 and 2, the second ~~rod-like~~ rod connection member 11 is articulated at one end thereof in a first point 14 to the wheel-carrier 1 and at the opposite end in a second point 15 to the vehicle structure and acts as a longitudinal rod. The third ~~rod-like~~ rod connection member 12 is articulated at one end thereof in a first point 16 to the wheel-carrier 1 and at the opposite end in a second point 17 to the vehicle structure and acts as a camber control rod. The first ~~rod-like~~ rod connection member 10 is used, together with the longitudinal rod 11, to restrain a lower portion of the wheel-carrier 1, whereas the camber control rod 12 is articulated to an upper portion of the wheel-carrier 1. Moreover, a spring-damper assembly 20 without structural function is interposed between the wheel-carrier 1 and the vehicle structure.

In Figure 6 there is illustrated in detail the first ~~rod-like~~ rod connection member 10, which comprises an elongated rigid central body 21, having for example a cylindrical tubular

structure, to the inner and outer ends of which are attached, for example by welding, cylindrical seats 22 and 23 intended to receive the bushes for articulation to the wheel-carrier 1 and to the vehicle structure, respectively. According to a first embodiment (Figure 6), the outer seat 22 receives a first pair of bushes 24 for articulation to the wheel-carrier 1 about a first axis x1, whereas the inner seat 23 receives a second pair of bushes 25 for articulation to the vehicle structure about a second axis x2. Preferably, though not exclusively, the axes x1 and x2 are arranged on planes perpendicular to the axis of the body 11, indicated y, whereby the connection member 10 has a double-T shape in plan view. Advantageously, the ratio between the longitudinal size of the connection member (that is to say, along the direction of the axis y of the body 21) and its transverse size (that is to say, along the directions of the axes x1 and x2) is at least 3.

Page 5, lines 6-25, please amend as follows:

According to a variant of construction, shown in Figure 7, each pair of bushes 24, 25 of the first ~~rod-like~~ rod connection member 10 may be replaced by one elongated bush. However, it is clearly possible to provide for a higher number of bushes received in the seats 22, 23 of the member 10.

As previously mentioned, the first ~~rod-like~~ rod connection member 10 is capable of controlling, in addition to the degree of freedom t of translation along its own axis y (which in this case corresponds to the geometrical axis of its own body 21), one first further degree of freedom r1 of rotation about the axis y (torsion), since torques applied on the wheel about directions perpendicular to those of the axes x1, x2 (as a result of the breaking forces, for example) are transmitted by the cylindrical seats 22, 23 to the body 21 in the form of torsional

stresses, which the body 21 can oppose by virtue of its own torsional stiffness. The ~~rod-like~~ rod connection member 10 is also capable of controlling, by virtue of its own bending stiffness, one second further degree of freedom r2 of rotation about a direction z substantially perpendicular to the axis y.

Page 6, lines 9-29 to page 7, lines 1-11, please amend as follows:

A suspension architecture of the type described above is therefore capable of controlling five degrees of freedom altogether by using only three ~~rod-like~~ rod connection members, instead of the five members required in a traditional multi-link system.

The use of a ~~rod-like~~ rod connection member according to the invention enables also to create a suspension system with a controlled compliance, that is, a system capable of withstanding specifically to forces applied in different points and acting in different directions. In order better to understand this aspect of the invention, the concept of shear axis will be introduced by referring to Figures 3 to 5. The shear axis of a generic compliant system can be defined as the axis about which the system has a torsional stiffness far smaller than that about other directions perpendicular thereto. The shear axis can thus be regarded as the locus of the points of greatest translational stiffness with respect to forces applied perpendicularly to that axis.

The geometrical construction of the shear axis s of the suspension is shown in Figure 3 in the theoretical case in which the ~~rod-like~~ rod connection member 10 is infinitely rigid under torsion about its own axis y. As a result of the translational stiffness of the three ~~rod-like~~ rod connection members 10, 11 and 12, the shear axis s must intersect the axes y and y1 of the members 10 and 11, respectively, as well as the axis y2 of the member 12. Moreover, as a result

of the torsional stiffness of the first ~~rod-like~~ rod connection member 10, the shear axis s must be perpendicular to the axis y of the latter. Displacements about the shear axis s are controlled by the stiffness of the first connection member 10 with respect to the direction corresponding to the above-defined degree of freedom r2.